

Site:	
Break:	1.2
Other:	4/82

STATISTICAL TRENDS IN PCB

Twelve Mile Creek--Micropterus (Figures I and V, Tables I, II, and III)

Spring 77-82: There is no trend for fish within the size class, but there is a slight downward trend for the smaller size fish.

Fall 77-78: There are no trends, but all values are below 5.0 ppm.

Twelve Mile Creek--Morone (Figures I and V, Tables I, IV, and V)

Spring 77-82: There is a slight downward trend, but it is not significant. This includes the out-of-size fish.

Fall 77-78: There is no trend, but almost all the values are Below 5.0 ppm.

Twelve Mile Creek--Ictalurus (Figures I and V, Tables I, VI, and VII)

Spring 77-82: There is a significant downward trend for fish within the size class, and most other values are below 5.0 ppm.

Fall 77-78: There are no trends, but 77 values are above 5.0 ppm, and 78 values are below.

& Camp Creek--Micropterus (Figures II and VI, Tables I, II, and III)

Spring 77-81: All of the values are below 5.0 ppm, and there is a significant trend for fish within the size class. This also downward applies to the out-of-size fish.

Fall 77-78: There are no trends, but all of the values are substantially below 5.0 ppm.

Camp Creek--Morone (Figures II and VI, Tables I, IV, and V)

Spring 77-82: There is a downward trend, ^{for fish within the size class} but it is not significant.

Fall 77-79; There is no trend, but almost all of the ~~x~~values are below 5.0 ppm.

Camp Creek--Ictalurus (Figures II and VI, Tables I, VI, and VII)

Spring 77-81: There is a significant downward trend for fish ~~xxx~~ within the ~~size class~~ size class. This includes the out-of-size fish too.

Fall 77-78: There is no trend, but almost all of the values are below 5.0 ppm.



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Andersonville--Micropterus (Figures III and VII, Tables I, II, and III)

Spring 77-81: There is a downward trend in values, but it is not significant. All of the values were below 5.0 ppm.

Fall 77-79: There are no values for fish within the size class. All of the values for other fish are ~~highly~~ significantly below 5.00 ppm.

Andersonville--Morone (Figures III and VII, Tables I, IV, and V)

Spring 77-82: There is a significant downward trend for fish within the size class, and most of the ~~values~~ values are ~~highly~~ below 5.00 ppm.

Fall 77-79: There is no trend, but all of the values are below 5.0 ppm.

Andersonville--Ictalurus (Figures III and VII, Tables I, VI, and VII)

Spring 77-81: There is a significant downward trend, and all of the ~~values~~ values are much below 5.0 ppm. This applies to the out-of-~~size~~ size fish, also.

Fall 77-79: There seems to be a slight upward trend, but it is not significant. All of the values are much below 5.0 ppm.

Tugaloo Arm--Micropterus (Figures IV and VIII, Tables I, II, and III)

Spring 77-79: There is no trend, but the values are much below 5.0 ppm.

Fall 77-79: There are no values for fish within the size class, but all of the other values are much below 5.0 ppm.

Tugaloo Arm--Morone (Figures IV and VIII, Tables I, IV, and V)

Spring 77-81: There is no trend, but most of the values are below 5.0 ppm.

Fall 77-79: There is no trend, but all of the values are much below 5.0 ppm.

Tugaloo Arm--Ictalurus (Figures IV and VIII, Tables I, VI, and VII)

Spring 77-79: There is no trend, but all of the values are much below 5.0 ppm.

Fall 77-79: There is no trend, but all of the values are much below 5.0 ppm.

Twelve Mile Creek:

- o The average concentration of PCBs in the edible tissue of Micropterus spp. falling within the prescribed size limits was 4.58 ppm. The range was 3.43-7.41 ppm. The average then was below the 5 ppm action limit, but if one considers the 1.25 ppm as a warning, all composites are potentially above the action limit.
- o The average concentration in the tissue of Morone spp. was 5.72 ppm which is above the FDA action level. The range was 0.84-10.17. Only the 0.84 was below the 1.25 ppm. This particular series of five composites points out the weakness of compositing fish when dealing with accumulation of substances in fish tissue.

Camp Creek:

The sampling for Micropterus spp. and Ictalurus spp. at Camp Creek was cancelled in 1982 because concentrations of PCBs in these species were well below the FDA 5 ppm limit and also below the 1.25 concern limit.

- o The average concentration of PCBs in the tissue of Morone spp. was 3.16 ppm. The range for 6 composites was 1.0 to 5.16 ppm. Of these, one was above the 5 ppm limit and four others were above 1.25 ppm.

Andersonville Island:

Micropterus and Ictalurus spp. were not sampled at this station in 1982 for the same reason as described under Camp Creek.

- o The average concentrations of PCBs in Morone spp. tissue was 2.3 ppm. The range of three composites was 1.6-3.0. None of the composites were above the FDA limits, but all were above the 1.25 ppm level.

In summary of the tissue concentration data of fish falling within the prescribed size limits, 6 of the 15 composites from Twelve Mile Creek were above the 5 ppm level, but 14 of 15 were above the 1.25ppm level. At Camp Creek where only Morone spp. were collected, one of six composites was above the FDA action level, but five out of six were above the 1.25 level. At Andersonville Island where again only Morone spp. were collected, no composites were above the FDA limit, but two of two were over the 1.24 level.

Lake Hartwell - 12 Mile Creek Cont.

Fish Species	Group No.	Length (mm)	Weight (g)	PCB (ppm)		
				1242	1254	Total
<u>Ictalurus catus</u>	S-1	250	220	0.20U*	3.13	3.13
	S-1	265	225			
	S-1	240	290			
	S-1	250	220			
	T-1	275	250	0.53	1.75	2.28
	T-1	280	275			
	T-1	270	240			
	T-1	270	240			
	U-1	295	280	1.31	4.65	5.96
	U-1	295	330			
	U-1	290	265			
	U-1	300	380			
	V-1	364	585	1.31	6.57	7.88
	V-1	310	490			
	V-1	320	380			
	V-1	360	590			
	W-1	415	1040	4.83	19.7	24.53
	W-1	381	840			
	W-1	400	950			
	W-1	410	1000			
	X-1	506	1970	4.39	4.42	8.81
	X-1	420	1210			
	X-1	535	2500			
	X-1	510	2150			
<u>Pylodictis olivaris</u>	Y-1	890	12,800	0.20U*	78.6	78.6
<u>Micropterus salmoides</u>	Z-1	520	2000	1.65	7.50	9.15
	Z-1	485	1700			
	Z-1	550	2000			
	Z-1	495	1600			

* U Material was analyzed for but not detected

PCB DATA
Lake Hartwell - Camp Creek
April, 1982

Species	Group No.	Length	Weight	PCB (ppm)		
				1242	1254	Total
<u>Morone</u> sp.	A-1	382	700	0.36	1.24	1.60
	A-1	382	780			
	A-1	379	770			
	A-1	378	740			
	B-1	385	760	0.20 U*	1.00	1.00
	B-1	383	750			
	B-1	386	680			
	B-1	383	690			
	C-1	387	800	1.46	3.70	5.16
	C-1	388	740			
	C-1	387	780			
	C-1	386	810			
	D-1	392	810	0.61	2.54	3.15
	D-1	393	770			
	D-1	389	800			
	D-1	390	750			
	E-1	400	820	0.62	3.79	4.41
	E-1	401	870			
	E-1	396	850			
	E-1	401	850			
	F-1	401	880	0.62	3.23	3.85
	F-1	405	920			
	F-1	403	920			
	F-1	404	920			

* Material analyzed for but not detected

PCB DATA
Lake Hartwell - Andersonville Island
April, 1982

Fish Species	Group No.	Length	Weight	PCB (ppm)		
				1242	1254	Total
<u>Morone chrysops</u>	A-1	380	560	0.20U*	1.63	1.63
	A-1	350	504			
	A-1	400	560			
	A-1	310	336			
	B-1	370	532	0.30	2.72	3.02
	B-1	360	450			
	B-1	390	616			
	B-1	340	504			
	C-1	300	308	0.20U*	0.52	0.52
<u>Morone sp.</u>	D-1	530	1856	1.41	3.14	4.55
	D-1	540	1800			
	D-1	540	1912			
	D-1	510	1658			
	E-1	610	2642	0.59	3.18	3.77
	E-1	500	1434			
	E-1	600	2502			
	E-1	510	1630			
	D-1	480	1350	0.20U*	2.19	2.19

*U - Material analyzed for but not detected

PCB DATA
LAKE HARTWELL - MARTIN CREEK
APRIL 1982

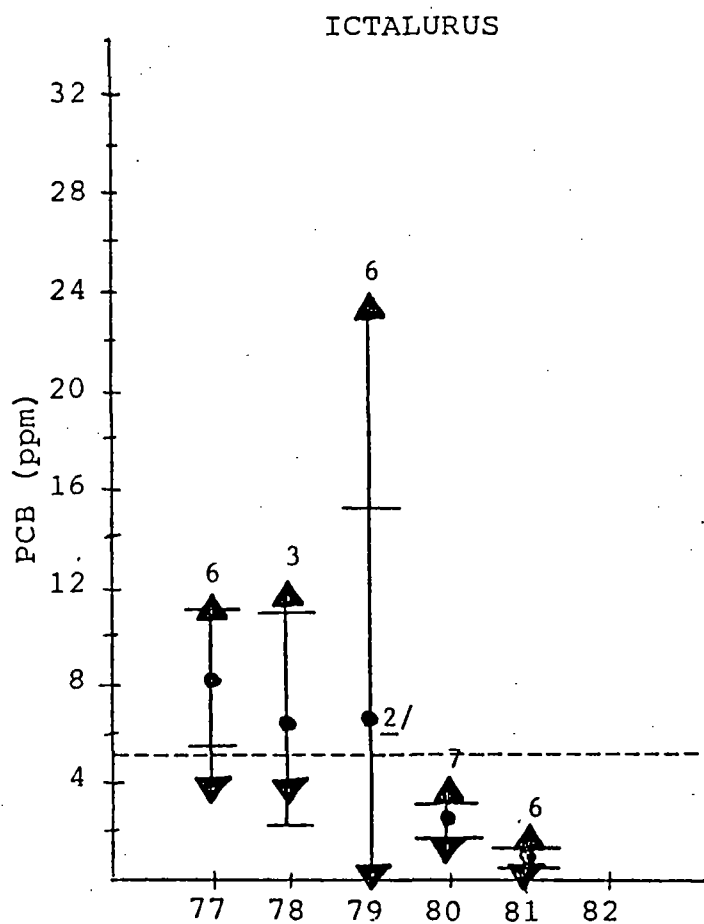
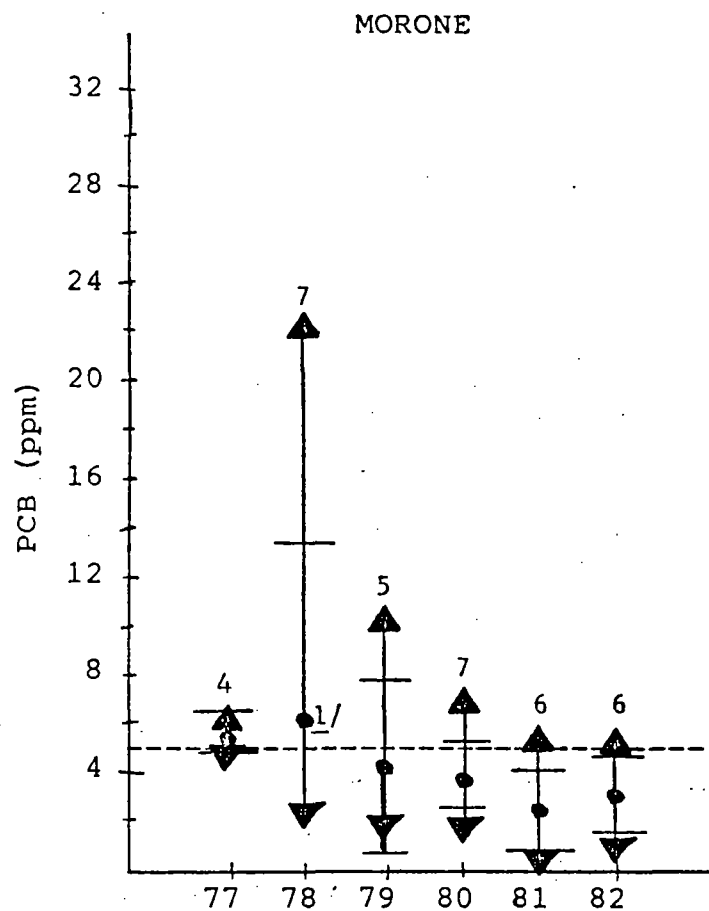
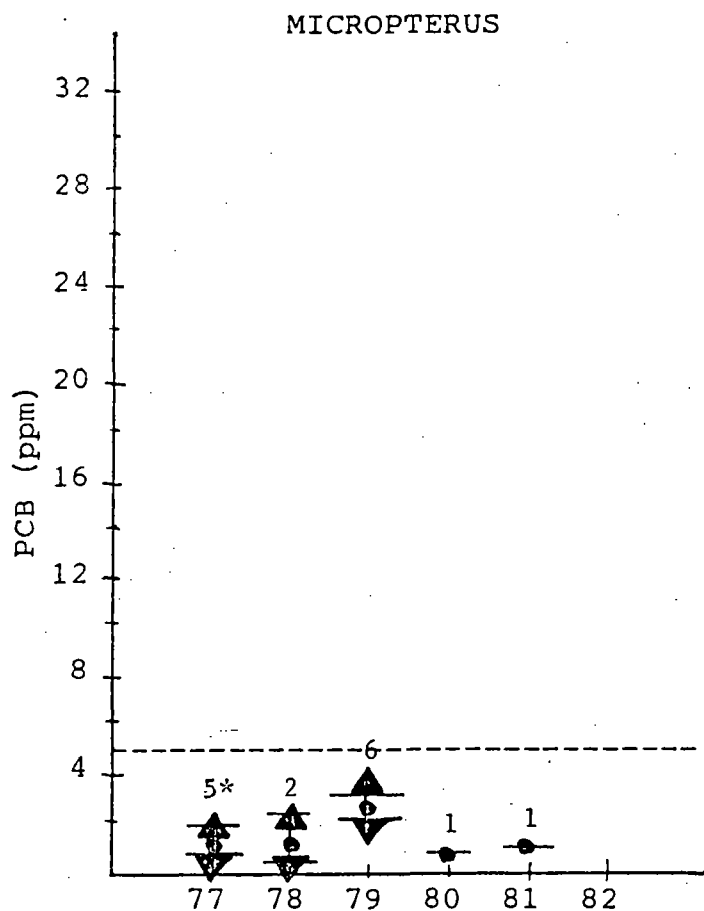
Species	Group #	Length	Weight	PCB (ppm)		Total
				1242	1254	
<u>Ictalurus catus</u>	A-2	253	189	0.39	1.58	1.97
	"	254	178			
	"	261	198			
	"	261	208			
	B-2	270	225	0.55	1.89	2.44
	"	270	230			
	"	274	263			
	"	275	243			
	C-2	277	207	0.45	2.29	2.74
	"	277	209			
	"	280	258			
	"	280	283			
	D-2	285	234	0.24	2.00	2.24
	"	287	275			
	"	293	264			
	"	285	259			
	E-2	328	412	0.20U*	0.32	0.32
	"	330	413			
	"	349	460			
	"	333	426			
<u>Micropterus salmoides</u>	F-2	265	222	0.20U	0.60	0.60
	"	270	212			
	"	276	237			
	"	285	262			
	G-2	288	231	0.20U	1.09	1.09
	"	291	262			
	"	302	277			
	"	305	324			
	H-2	308	351	0.20U	0.52	0.52
	"	304	360			
	"	315	341			
	"	316	347			
	I-2	320	387	0.20	0.60	0.80
	"	323	408			
	"	327	427			
	J-2	337	467	0.41	1.18	1.59
	"	340	463			
	"	343	460			
	"	358	558			
	K-2	382	666	0.56	2.08	2.64
	"	391	786			
	"	405	866			
	"	406	808			

* Material analyzed for but not detected

LAKE HARTWELL - MARTIN CREEK (continued)

Species	Group #	Length	Weight	PCB (ppm)		Total
				1242	1254	
<u>Morone chrysops</u>	L-2	301	345	1.06	3.54	4.60
	"	302	416			
	"	306	411			
	"	307	480			
	M-2	309	426	1.72	4.95	6.67
	"	318	428			
	"	318	435			
	"	322	460			
	N-2	325	453	1.11	3.38	4.49
	"	332	537			
	"	337	571			
	"	339	518			
	O-2	341	531	0.94	3.81	4.75
	"	349	615			
	"	358	668			
	"	367	715			
	P-2	372	754	0.98	4.44	5.42
	"	377	829			
	"	384	717			
	"	405	896			
<u>Morone</u> (Hybrid bass)	Q-2	391	842	0.95	3.38	4.33
	"	407	920			
	"	410	934			

CAMP CREEK -- SPRING



KEY

- ▲ Maximum Value
- ▼ Minimum Value
- Mean
- I Standard Deviation
- FDA Action Level
- * Number of composites per year

1/NOTE: Mean - standard deviation is -0.9 (not shown)

2/NOTE: Mean - standard deviation is -2.06 (not shown)